

Transactions of the All-Union (Cont.)	SOV/5962	
<u>Babich, Yu.A.</u> Filtration of a Fluid in Heterogeneous Strata		127
Makhmudov, Yu.A. Results in the Development of a Universal Digital Computer Employing Magnetic (Ferritic) Elements		138
Makhmudov, Yu.A. Instruction System for a Universal Digital Computer Employing Magnetic (Ferritic) Elements and Its Schematic Execution		155
Ragimova, Kh.S. Use of Computers in Solving Petroleum Industrial Engineering Problems		177
Belkin, V.D. Use of Electronic Computers in Planning the National Economy		189
Nikolayev, N.S. New Analog Computers (Electromodels) for the Solution of Problems in Mathematical Physics		200

Card 5/6

AZIMOV, B.A.; AMBARTSUMYAN, A.P.; BABICH, Yu.A.; BABICH, E.S.; GASANOVA,
S.A.; GUKASOVA, Ye.K.; KUTUZOV, A.I.; MAMEDOV, G.A.;
PIRVERDYAN, A.M.

Additional data on the problems of the development of the series
"break" in the Neftyanyye Kamni field obtained by electric
modeling methods. Azerb.neft.khoz. 41 no.8:26-29 Ag '62.

(MIRA 16:1)

(Neftyanyye Kamni region--Oil well drilling, Submarine)
(Geological modeling)

SHEVTSOV, A.L.; BABICH, Ye.P.

Tendency of G13L steel toward film formation. Lit.proizv. no.7:1-2
J1 '64. (MIRA 18:4)

BADICH, Ye.P.; SEVAST'YANOV, N.S.; SABUROV, V.P.

Mechanical properties of heat resistant inoculated cast iron
with 20-24% aluminum. Lit.proizv. no.7:4-6 JI '64.

(MIRA 18:4)

BABICH, Yu.D., referent

Industrial use of ore comminution without balls (from
"Mining Engineering" no.5, 1959). TSvet.met. 33 no.5:
89-92 My '60. (MIRA 13:7)
(Ore dressing—Equipment and supplies)

BABICH, Z.Y. 114

BC

Micro-determination of the chloride of blood.
V. V. Babich, Leningrad, and E. A. Babich
(Russian J. Physiol., 1959, 33, 10-11).—Blood
 being a medium for conserving and determining
 chloride in blood plasma is a considerable source of
 chloride, and the method described in this paper with
 the use of a special device is recommended: 0.05
 g. of blood is placed in a 0.5% solution of sodium
 chloride (0.1 g. of sodium chloride in 20 ml. of water)
 and the mixture is stirred for 3 min. The tube is then centrifuged for 5 min. until
 the liquid becomes clear. After centrifuging of this
 liquid a 0.5% solution of sodium chloride is added and centrifuged
 with 0.05 g. of blood. The clear liquid being added to
 the first portion, the total amount in presence of
 0.1 g. of blood is 0.5% sodium chloride solution with
 0.1 g. of blood. At this moment with the
 aid of a special device the difference between the two
 volumes of the liquid solution required multiplied by
 0.005 giving the mg. of sodium chloride in the blood.
 Author's address: 191000 Leningrad, T. M. Puzin, 1.

ASB-3.4 METALLURGICAL LITERATURE CLASSIFICATION

190000 7A	190000 7A1 7A2 7A3 7A4 7A5 7A6 7A7 7A8 7A9	190000 7A1 7A2 7A3 7A4 7A5 7A6 7A7 7A8 7A9	190000 7A1 7A2 7A3 7A4 7A5 7A6 7A7 7A8 7A9

SHULIN, Z. Ye.

ICA

11 E

Dehydration of the body and the acid-base balance in experimental exsiccosis. Z. E. Shulin, R. D. Vydro and M. I. Yanoshevskaya. *Pediatrics* 1941, No. 3, 34-35.

In one series rabbits were placed on a diet of oats, bread and hay, $MgSO_4$ and condensed Moro's mist. The degree of dehydration was detd. by the amt. of dry residue of blood, hemoglobin, erythrocytes and serum proteins before and after dieting, when the animals had lost 20-22% of body wt. (at 7-9 days). In comparison with controls, the amt. of all blood elements had increased. The alkali reserves had decreased from 42.2 to 31.3 (av.) and the pH of blood, from 7.48 to 7.44. The Cl coeff. was increased;

this also indicates an acidosis. In another series the animals were fed (1) oats, hay and bread, (2) oats, bread and $MgSO_4$ and (3) oats, hay and bread, while being kept at 29-31°. The animals of the 2nd and 3rd groups were sacrificed at 4 days, since their condition was as emaciated, as that of the first group at 7-8 days. Blood elements were detd. as before, with the addnl. detn. of blood buffers. The findings corresponded to those of the first series, though some animals of the 2nd and 3rd groups died on the 7th and 10-16th day, resp., while one rabbit died on the 25th day. In a third series puppies, 6-8 weeks old, were used. One group was fed a condensed Moro mist, and $MgSO_4$, and a 2nd group, on the same diet, was kept at 29-31°. The concn. of blood constituents and the Cl coeff.

increased gradually from the first days on. The alkali reserve remained normal until the last day before death, when it fell markedly. Conclusions: Dehydration causes acidosis. Anhydremia of blood develops mainly at the cost of plasma. Protracted dehydration causes a loss not only of interstitial but also intracellular water. However, dehydration alone would scarcely have caused the profound colloid-chem. changes in the tissues that upset their capacity to bind water. The observed shifts obtained under identical conditions can be subject to individual reactivity (e. g., blood buffers). In puppies exsiccosis is more progressive in summer months than in other seasons, since overheating in addn. to a condensed diet affects water metabolism and the acid-base balance, which is analogous to the clinical picture of toxemia in children. T. I.

ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION

EXPER. STY. DESIGN

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EXPER. STY. DESIGN

EXPER. STY. DESIGN

EXPER. STY. DESIGN

EXPER. STY. DESIGN

BABICH, Z.Ye.

"Carbonemia in Certain Diseases of Infants," Vop. Ped. 1.
Okhran. Mater. i. Dett., 17, No. 3, 1949 (Ukr. Sci. Res. Inst.
Maternity & Child Welfare 1949

BAFICH, Z. Ye.

21062 Babich, Z. Ye. Ugol'naya angidraza Krovi pri Razlichnykh zabolevaniykh i detey Rannego vosrasta Voprosy pediatrii i okharny materinstva i detstva, 1949, vyp. 3, s.33-37.

SO: LETOPIS ZHURNAL STATEY - Vol. 28, Moskva, 1949

BABICH, Z.Ye.

Glycolytic activity of the blood in infants. Vopr. pediat.
19 no. 3:30-34 1951. (CML 21:3)

1. Of the Ukrainian Institute for the Care of Mothers and
Children (Director -- Candidate Medical Sciences A. G. Pap).

Babich, Z.Ye.
SIGALOV, D.L., dotsent; BABICH, Z.Ye., kand.biologicheskikh nauk

Role of the changes in blood proteins in pneumonia in infants and small children. *Pediatrics* no.9:28-34 S '57. (MIRA 10:12)

1. Iz kafedry pediatrii (zav. D.L.Sigalov) Kiyevskogo instituta usovershenstvovaniya vrachey (dir. - zasluzhennyy deyatel' nauki I.I.Kal'chenko) i biokhimicheskoy laboratorii (zav. Z.Ye. Babich) Ukrainskogo instituta OKhMD (dir. - zasluzhennyy vrach respubliky M.D.Burova)

(PNEUMONIA) (BLOOD PROTEINS)

BABICH, Z.Ye.

Carbohydrate metabolism in newborn children. Von. okh. mat. i det. 3
no.1:57-61 Ja-F '59. (MIRA 12:2)

1. Iz Ukrainskogo instituta okhrany materinstva i detstva imeni Gero-
Sovetskogo soyuza prof. P.M. Buyko (dir. - zasluzhennyy vrach respublik
M.D. Burova).

(CARBOHYDRATE METABOLISM) (INFANTS (NEWBORN))

KOSSOVSKIY, Georgiy Nikolayevich; BABICH-DEKAN', Feliks Trofimovich;
VARAKIN, Yu.M., red.; SEDOVA, Z.D., red.izd-va; PARAKHINA,
N.L., tekhn. red.

[Programmed control of the adjustment of woodworking machines and
automatic production lines] Programnoe upravlenie nastroikoi
derevoobrabatyvaiushchikh stankov i avtomaticheskikh lini. Mo-
skva, Goslesbunizdat, 1962. 78 p. (MIRA 15:5)
(Woodworking machinery) (Assembly-line methods)

KOSSOVSKIY, G.N.; BABICH-DEKAN', F.T.; REVUTSKAYA, I.G.

Automatic production line with programm control of machinery adjustment developed by the Ukrainian Scientific Research Institute of Mechanical Woodworking. Der.prom. 11 no.2:7-10 F '62.
(MIRA 15:1)

1. Ukrainskiy nauchno-issledovatel'skiy institut mekhanicheskoy obrabotki drevesiny.

(Ukraine--Woodworking machinery)

(Automatic control)

BABICHENKO, A.S., inzhener; LEVENKO, P.N.; GRUSHKO, M.Kh.

Automatic machine for grinding fiber with rollers. Leg.prom. 14
no.5:43-45 My '54. (MIRA 7:6)
(Paperboard)

BABICHENKO, A.S.; ZEMLINSKAYA, Ye.I.

Practices in the Odessa Bristle and Brush Factory. Leg.prom. 15
[i.e. 16] no.6:46-47 Je '56. (MLRA 9:8)
(Odessa--Brooms and brushes)

BABICHENKO, A.S.

PASOV, M.S.; BABICHENKO, A.S.; BASHIN, S.Ya.

New technological processes in manufacturing paintbrushes. Log.
prom. 18 no.2:48-49 P '58. (MIRA 11:2)

1. Direktor Odesskoy shohetino-shchetohnoy fabriki (for Pasov).
 2. Glavnyy inzhener Odesskoy shohetino-shchetohnoy fabriki (for Babichenko).
 3. Nachal'nik laboratorii Odesskoy shohetino-shchetohnoy fabriki (for Bashin).
- (Brooms and brushes)

GRABOVSKIY, A.M.; DUNCHEVSKIY, G.M.; PASOV, M.S.; RABICHENKO, A.S.;
RASHIN, S.Ya.

Mechanization of the process of degreasing and washing of natural
bristles. Kozh.-obuv. prom. no.3:32-35 Mr '59.

(Bristles--Cleaning) (Washing machines) (MIRA 12:6)

BABICHENKO, A.S.

Revise the specifications for the semiprocessed and finished products of the bristle and brush industry. Kozh. obuv. prom. 5 no.7:30-31 JI '63. (MIRA 16:8)

1. Glavnyy inzh. Odesskoy shchetino-shchetochnoy fabriki.
(Bristles) (Brooms and brushes)

GINDIS, A.P.; BABICHENKO, A.S.

Experience in the industrial application of ultrasonic waves for the intensification of bristle washing and degreasing processes. Kosh. zhiv. prom. 6 no.8:35-36 45 1961.
(MIRA 17-10)

CHECOSLOVAKIA

GOLOVA, A.V., MD, Director of the Pathophysiological Laboratory;
RODIN, V. I., MD, Candidate of Sciences, director of the Bio-
chemical Laboratory; BABICHENKO, E.I., MD, Candidate of Sciences,
director of the Clinic of Neurosurgery. Research Institute of
Traumatology and Orthopedics, Decent Dr I.M. RODIN, director,
Saratov, USSR.

"Functional State of the Endocrinal System During Spine In-
juries"

Prague, Casopis Lekaru Ceskych, Vol CII, No 24, 14 June 63,
pp 663-666.

Abstract: A total of 56 patients were investigated. Injuries
were localized as follows: neck spine -11, chest spine - 24,
loin spine - 19, and 3 injuries of conus medullaris and cauda
equina. Functioning of the thyroid gland was examined in 32
cases. Results of examinations showed a substantial reduction
in the percentage of intercepting I^{131} by the thyroid gland in
22 cases, in the rest the percentage remained at the level of
the lower normal limit. The interception speed was also re-
duced. The number of eosinophiles was conspicuously low. It
seems that reduction of activities is connected with phenomena
concerning central and reflexion dampening in the higher portions
of the central nervous system. Reduced hormonal activity may
be a manifestation of the adjustment of post-injury mechanisms.

FERTEL'BEYSTER, Ya. N.; BABICHENKO, I. I.; DUN, D. L.

Radiographic determination of quartz in rock and coal powder. Zav.
lab. 21 no. 6: 702-705 '55. (MLRA 8:9)

1. Makeyevskiy nauchno-issledovatel'skiy institut po bezopasnosti
rabot v gornoy promyshlennosti
(Quartz) (Dust--Analysis)

BABICHENKO, L.; ALASHOVA, P.; YEVLANOVA, N.

Rapid determination of the quantity of dry ingredients in
foods. Obshchestv.pit. no.1:21-22 Ja '60.

(MIRA 13:5)

1. Kafedra tekhnologii prigotovleniya pishchi Moskovskogo
instituta narodnogo khozyaystva im. G.V.Plekhanova.
(Food--Analysis)

BABICHENKO, L., assistant

Cured flour composition for red sauces. Obshchestv.pit. no.12:18-19
D '60. (MIRA 13:12)

1. Kafedra tekhnologii prigotovleniya pishchi Moskovskogo instituta
narodnogo khozyaystva im.G.V.Flekhanova.
(Sauces)

BABICHENKO, L.; BURLUTSKAYA, P.; KRIVOSHEYEVA, V.

Sauces from paste. Obshchestv. pit. no. 1:25 Ja '61.
(Sauces) (MIRA 14:1)

17(2)

SOV/177-58-11-32/50

AUTHORS: Kiselev, A.G., Lieutenant-Colonel of the Medical Corps
and Babichenko, M.Ye., Lieutenant of the Medical Corps

TITLE: Treatment and Prophylaxis of Influenza and Catarrh
of the Above Respiratory Channels

PERIODICAL: Voenno-meditsinskiy zhurnal, 1958, Nr 11, pp 83 -
84 (USSR)

ABSTRACT: In a military unit patients suffering from catarrh of
the above respiratory channels and influenza were
successfully treated with a mixture applied by Pro-
fessor P. Kartashov which was composed of salicyl
sodium - 1.0, potassium iodide - 0.1, distilled
water - 200.0 and six drops of iodine tincture. The
mixture also proved to be a good prophylactic against
catarrh and influenza.

Card 1/1

BABICHENKO, M.Ye.

Pathways of the spread of epidemic hepatitis in a closed
community. Zhur.mikrobiol.epid. i immun. 30 no.4:71-74
Ap '59. (MIRA 12:6)

(HEPATITIS, INFECTIOUS, transm.
in closed community (Rus))

BABICHENKO, M.Ye. (Luga, Leningradskoy oblasti)

Arterial pressure in Botkin's disease. Vrach.delo no.5:517 My '60.
(MIRA 13:11)

(HEPATITIS, INFECTIOUS)
(BLOOD PRESSURE)

BABICHENKO, M. Ya., starshiy leytenant meditsinskoy sluzhby

Treatment of furuncles with biomyein and ascorbic acid. Voenn. med.
zhur. no. 8:78 Ag '61. (MIRA 15:2)
(FURUNCLE) (AUREOMYCIN) (ASCORBIC ACID)

Bar. M. D.

On the theory of endogenous growth. Vest. drev. 1 vol.
St. Petersburg 1963. (1963: 17:6)

PARISHAKO, N. I., GOROV, M.S., S'PODOL'NAYA, A.I.

Boots and Shoes - Trade and Manufacture

New method of making and stitching stiff
counters. Leg. prom. 12 no. 4:43-44 Ap '52.

Monthly List of Russian Accessions, Library of
Congress, July 1952. Unclassified

BABICHENKO, N.I.; SAPOZHNIKOV, A.M.; OKOPOV, M.S.

Lug-stopper with shock absorber. Leg.prom. 14 no.8:25-26 Ag '54.
(Shoe machinery) (NIRA 7:8)

BABICHENKO, N.I.: SAPOZHNIKOV, A.M.; OKOPOV, M.S.

Broaden the use of the new method of sewing in stiff counters.
Leg.prom. 14 no.12:51-52 D '54. (MIRA 8:2)
(Shoe industry)

OKOPOV, M.S.; BABICHENKO, N.I.

Machine for ironing out the back seam of a kersey boot. Leg.prom.
16 no.9:46-48 S '56. (MLRA 9:11)

(Shoe industry)

SABICHENKO, N.I.; OKOPOV, M.S.

Multineedle sewing machine for footwear manufacture. Leg.prom.
18 no.6:47-48 Jo '59. (MIRA 12:10)
(Sewing machines) (Shoe industry)

BABICHENKO, N.I.

Introducing new equipment in the shoe industry. Kozh.-obuv.
prom. 2 no.7:35-36 J1 '60. (MIRA 13:8)

1. Nachal'nik shveynogo potoka poshivochnogo tsakha No.1
Kiyevskoy obuvnoy fabriki No.1.
(Kiev--Shoe machinery)

BABIARENKO, N.I.

New developments in the sewing of uppers for high boots and low shoes made of Russian leather. Leh.prom. no.1:56-58 Ja-Mr '62, (MIRA 15:9)

1. Kiyevskaya obuvnaya fabrika No.1.
(Shoe manufacture)

BABICHENKO, N.I. [Babychenko, N.I.]

Exchange of experiences with the Kuznetsk Shoe Factory. Leh.prom.
no.4188 O-D '62. (MIRA 16:5)

(Shoe manufacture)

SOV-180-54-3-26/33

AUTHORS: Babichenko, S. I., Bogdanov, A. A. and Khazanov, B.I.

TITLE: A Rate-Meter Based on Crystal Triodes (Izmeritel' sredney skorosti scheta na kristallicheskikh triodakh)

PERIODICAL: Pribury i Tekhnika Eksperimenta, 1957, Nr 3, pp 101-105 (USSR)

ABSTRACT: The circuit of the instrument (including the values of the components) is given in Fig.1. The circuit consists of an input stage, a pulse forming stage and an integrator. Three germanium triodes are used (P6V). The input stage consists of a scaling circuit (two triodes) which is coupled to the amplifier triode through a potential divider. The circuit may be used either with a Geiger counter or a photoelectric multiplier. Low leak condensers are used in the integrator and the supplies consist of a 14 V battery, the working current being 10 mA. The input

Card 1/2

SOV-120-58-3-26/33

A Rate-Meter Based on Crystal Triodes

resolution is 2-3 μ sec. The circuit performance does not depend on the temperature (3% error when the temperature changes from -40 to 60°C). There is 1 figure and 1 Soviet reference.

SUBMITTED: August 26, 1957.

1. Radiation counters--Design
2. Radiation counters--Temperature factors
3. Triodes--Applications
4. Germanium--Applications

Card 2/2

BABICHENKO, S.I.; BOGDANOV, A.A.; GORN, L.S.; KAGAN, M.L.; KRYLOV,
L.N.; OL'DEKOP, L.G.; KHAZANOV, B.I.; MELESHKO, V.K., red.;
DRUZHININA, L.V., tekhn. red.; POPOVA, S.M., tekhn. red.

[Radiometric process instrumentation] Kontrol'no-izmeritel'-
naia radiometricheskaia apparatura. [By] S.I.Babichenko i dr.
Moskva, Gosatomizdat, 1963. 148 p. (MIRA 16:12)
(Radiometry)

L 41918-65 ENT(1)/DEC(m)/ENT(m)/EW3(v)/POC/DEC-4/ELC(t)/T/ENH(h) Po-4/Pe-5/
Po-4/Pae-2/PeB/P1-4 IJP(c) GM UR/0293/65/003/002/0237/0243
ACCESSION NR: AP5009640

AUTHOR: Babichenko, S. I.; Karpinskiy, A. P.; Kujala, S. A.; Katyushina, V. V.;
Krylov, E. N.; Kuznetsov, V. S.; Pustovayt, P. M.; Shifrin, A. V.

TITLE: Investigation of scattered gamma radiation in the upper air sphere
1. Equipment

SOURCE: Kosmicheskiye issledovaniya, v. 3, no. 2, 1965, 237-243

TOPIC TAG: gamma radiation, radiation counter, Geiger counter, SFM-1
radiation counter

ABSTRACT: Photon counters used in investigation of scattered gamma radiation in the upper air sphere are described. The counters of the SFM-1 type, are filled with a special material. The results of the investigation are presented.

"APPROVED FOR RELEASE: 06/06/2000

CIA-RDP86-00513R000102820018-9

1000 pps, which keeps at 1000

Card 1/2

APPROVED FOR RELEASE: 06/06/2000

CIA-RDP86-00513R000102820018-9"

ASSOCIATION: none

SUBMITTER: 23Jul64

ENCL: 00

SUB CODE: OP, AA

NO REF SOV: 005

OTHER: 002

ATD PRESS: 3235

22
Card 2/2

BABICHENKO, S.I.; KRYLOV, L.N.; RAYKOV, V.S.; UTEKHIN, A.P.

Improving the accuracy of radiometric analysis of multicomponent
samples. Atom. energ. 18 no.4:426-428 Ap '65.

(MIRA 18:4)

L 58982-65 EWT(1)/EWT(m) Feb DIAAP CW

ACCESSION NR: AP5019019

UR/0286/65/000/012/0243 1044
150,839

AUTHOR: Patichenko, S. I.; Utekhin, A. P.

TITLE: A gamma scintillation spectrometer for coring. Class 21, N. 171940

SUBJECT: "Svullsten" (shchasteniy i tovarnyy znak) ...

TOPIC TAGS: scintillation spectrometer, coring, well logging

ABSTRACT: This Author's Certificate introduces a gamma scintillation spectrometer for coring. The device is designed for the detection and measurement of gamma radiation from the well bottom.

The device consists of a gamma scintillation detector, a preamplifier, a discriminator, and a counter. The detector is mounted on a coring tool joint.

ASSOCIATION: Predpriyatiye gosudarstvennogo komiteta po ispol'zovaniyu atomnoy energii (Enterprise of the State Committee for Use of Atomic Energy, USSR)

REPORT: 1914500

ENCL

SUB CODE: ES,

NO REF SOV: 000

OTHER: 000

Card 1/2

L 58982-65

ACCESSION NR: AP5019013

ENCLOSURE: 01

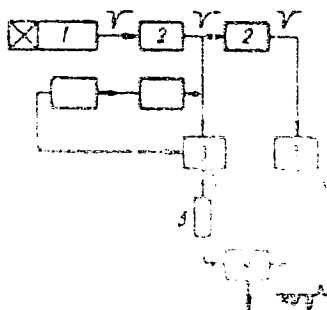


Fig. 1. Schematic diagram of the circuit for the control of the motor.

Card 1

BABICHENKO, S.I.; UTEKHIN, A.D.

Logging gamma **spectrometer** with a wide dynamic range of analyzable
energies. IAs.prib. no.1:12-138 '67. (MIRA 18:5)

L 3163-66 EWT(m)/EWP(t)/EWP(b) DIAAP/IJP(c) JD
 ACCESSION NR: AP5018137 UR/0089/65/018/004/0426/0428

AUTHOR: Babichenko, S. I.; Krylov, L. N.; Raykov, V. S.; Utekhin, A. P.

2/
B

TITLE: Improved multicomponent radiometric analysis

SOURCE: Atomnaya energiya, v. 18, no. 4, 1965, 426-428

TOPIC TAGS: gamma spectrum, gamma spectroscopy, radiation instrument, uranium, radium, thorium, potassium

ABSTRACT: The results of gamma-spectrum analysis $N=f(E)$ of uranium, radium, thorium, and potassium were used for estimating the stability of gamma spectrometers. Studies were made of the construction principles of a high-stability amplitude pulse analyzer with differential channels and of the methods for improving the efficiency of radiometric analysis of multicomponent specimens. Differential gamma spectra are given for uranium, U_2O_8 , thorium, and potassium in a 15-kev channel with the level discrimination at 95 ± 3 kev. Orig. art. has: 2 graphs, 2 tables, 1 figure.

Card 1/2

L 3163-66

ACCESSION NR: AP5018137

ASSOCIATION: none

SUBMITTED: 24Feb64

NR REF SOV: 002

ENCL: 00

OTHER: 000

SUB CODE: NP, OP

NA

Card 2/2 *red*

BABICHENKO, V.N.

Particularly heavy rains in the Ukraine. Trudy Ukr.NIGMI no.13:
69-72 ' 58. (MIRA 11:12)
(Ukraine--Rain and rainfall)

BABICHENKO, V.N.

Distribution of precipitation amounting to a daily
minimum of 100 mm in the Ukraine. Trudy UkrNIGMI
no.18:30-38 '59. (MIRA 13:7)
(Ukraine--Rain and rainfall)

BABICHENKO, V.N.; GUK, N.I.; GOYSA, N.I.; PRIKHOT'KO, G.F.; PROKH, L.Z.;
ROZOVA, Ye.S.

Meteorological observations in the Ukraine during the period July
1957-June 1958. Mezhdunar. geofiz. god [Kiev] no.2:130-140 '60.
(MIRA 14:1)

1. Ukrainian Research Institute for Hydrometeorology.
(Ukraine—Meteorology—Observations)

BABICHENKO, V.N.

Fundamental characteristics of extremely heavy rainfalls
in the Ukraine. Trudy UkrNIGMI no.23:39-48 '61. (MIRA 14:8)
(Ukraine—Rain and rainfall)

ACCESSION NR: AT4016462

S/2599/63/000/038/0086/0092

AUTHOR: Babichenko, V. N.

TITLE: Temperature regime during thaws in the Ukraine

SOURCE: Kiev. Ukrainskiy nauchno-issledovatel'skiy gidrometeorologicheskii institut. Trudy*, no. 38, 1963. Voprosy klimatologii (Climatology Problems), 86-92

TOPIC TAGS: meteorology, air temperature, thaw, snow, atmospheric circulation, climate, climatology

ABSTRACT: A thaw day is a day in the winter (December, January, February) with a maximum air temperature above 0°C. High winter temperatures in the Ukraine are caused by advection of warm air masses from the west, but even more frequently result from persistent southerly winds. Particularly high winter temperatures occur when warm air moves rapidly and is not cooled along its path. Arrival of warm maritime air causes clouds and dense advective fogs, reducing radiation losses to negligibly small values. Climatic data were studied to determine the precise conditions under which winter thaws occur. Local and regional differences are discussed, but the following generalizations can be made. During winter thaws associated with strong heat advection the maximum air temperatures, 18-23°, are observed in the Crimea; the lowest maxima, 6-7°, are observed in the north-eastern Ukraine. The most frequently observed maximum thaw temperatures are 0.1 to 4°;
Card 1/2

ACCESSION NR: AT4016462

the probability of their occurrence varies from 70% in the north to 50% in the south. Continuous 24-hour thaws occur when air temperature variation during a 24-hour period is insignificant. Such thaws occur in most cases when maximum air temperatures are above 3°, although occasionally when temperatures are below this value. Orig. art. has: 1 table and 3 figures.

ASSOCIATION: Ukrainskiy nauchno-issledovatel'skiy gidrometeorologicheskii institut
(Ukrainian Hydrometeorological Scientific Research Institute)

SUBMITTED: 00

DATE ACQ: 20Feb64

ENCL: 00

SUB CODE: AS

NO REF SOV: 004

OTHER: 000

Card 2/2

01
v

BABICHENKO, V.N.

Threat in the Ukraine. Treaty URS-NGM No. 11-11-52 1/2.
(MIR 17:10)

AUTHOR: Babichenko, V. N.

TITLE: Dust storms in the Ukraine

SOURCE: Kiev, Ukrainskiy nauchno-issledovatel'skiy institut

Ukrainian Academy of Sciences, Kiev

TOPIC INFO: climatology, dust storm 44

ABSTRACT: This article discusses the problems of repeated dust storms in the Ukraine. Their location, intensity, and daily and yearly occurrence. Some of the most severe dust storms are briefly described. Observational data for the period 1930-63 show that dust storms in the Ukraine are most common in the southeastern and southern parts of the country and are most frequent in the period March through September. A storm on April 1928 raised more than 15 000 000

"APPROVED FOR RELEASE: 06/06/2000

CIA-RDP86-00513R000102820018-9

Card 1/2

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CIA-RDP86-00513R000102820018-9"

2. Figures and Tables.

ASSOCIATION: Ukrainskiy nauchno-issledovatel'skiy institut gidrometeorologicheskoy
fiziki (Ukrainian Scientific Research Hydrometeorological Institute)

1. NAME: (Name)

OTHER: (Other)

Bas. CHENKO, V.H.; ROZOVA, Ye.S.

Certain atmospheric phenomena in the Ukraine harmful
to the national economy. Geofiz. i astron. no.3:122-126
'65. (MIRA 1971)

1. Ukrainskiy nauchno-issledovatel'skiy gidrometeorologicheskii institut.

Babichenko, Ya. N.

✓ 1965. X-RAY DETERMINATION OF QUARTZ IN ROCK AND COAL DUST.
FV Fartol'molster, Ya. N. Babichenko, I. L. and Dan, D. L. (Zavod. Lab. (Faot. Lab.,
Moscow), 1955, vol. 21, 702-705).

(2)

BABICHENKO, Ye. (Luganskaya oblast')

Heroism of a collective farm worker. Posh.delo 6
no.8:27 Ag '60. (MIRA 13:8)
(Lugansk Province--Women as farmers)
(Collective farms--Fires and fire prevention)

BASICHENKO, Ye. I. --

"Variations in the Lability of Nerves, Muscles, and Neuromuscular
Synapses in Patients Suffering From Secondary Trauma of the Spinal Cord."
Cand Med Sci, Saratov State Medical Inst, Saratov, 1963. (RZhBiol, No 4, Oct 54)

Survey of Scientific and Technical Dissertations Defended at USSR
Higher Educational Institutions (10)

SO: Sum. No. 481, 5 May 55

"APPROVED FOR RELEASE: 06/06/2000

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BABICHENKO, Ye.I., kandidat meditsinskikh nauk; **SKOTNIKOV, V.I.**

Ossification of the aural pinna. Vest.otorin. 18 no.2:72-73 Mr-Apr '56.
(MLRA 9:7)

1. Iz kliniki neyrokhirurgii (zaveduyushchiy zasluzhennyy deyatel' nauki professor P.I.Madin) Saratovskogo nauchno-issledovatel'skogo instituta vosstanovitel'noy khirurgii, travmatologii i ortopedii i kafedry rentgenologii (zaveduyushchiy dotsent V.N.Shtern) Saratovskogo meditsinskogo instituta.

(EAR--DISEASES) (OSSIFICATION)

BABICHENKO, Ye.I., kand.med.nauk; LIVSHITS, L.Ya. (Saratov)

Echinococcosis of the brain. Klin.med. 37 no.9:148 S '59.

(MIRA 12:12)

1. Iz kliniki neyrokhirurgii (ispolnyayushchiy obyazannosti zavedu-
yushchego - kand.med.nauk Ye.I. Babichenko) Saratovskogo nauchno-iss-
ledovatel'skogo instituta travmatologii i ortopedii (dir. - dotsent
Ya.N. Rodin).

(BRAIN, diseases)

(ECHINOCOCCOSIS, case reports)

BABICHENKO, Ye.I.

Transportation splint in fractures of the cervical segment of
the spine. Ortop., travm.i protez. 21 no.1:62-63 Ja '60.
(MIRA 13:12)

(SPINE—FRACTURE)

BABICHENKO, Ye.I., kand.med.nauk (Saratov, Kommunarnaya pl., d.5, kv.13)

Posttraumatic deformities of the spine. Ortop., travm. i protez.
23 no.5:80-81 My '62. (MIRA 15:11)

1. Iz kliniki neyrokhirurgii (zav. - kand.med.nauk Ye.I. Bobi-
chenko) Saratovskogo instituta travmatologii i ortopedii (dir. -
dotsent Ya.N. Rodin).
(SPINE—WOUNDS AND INJURIES)

GORKOVA, A.V.; RUBIN, V.J.; BABICENKO, E.I.

Functional state of the endocrine glands following spinal cord injuries. Cas. lek. cesk. 102 no.24:663-666 14 Je '63.

1. Klinika neurochirurgie, prednosta MUDr. E.I. Babichenko, CSc., Biochemicka laborator, prednosta MUDr. V.J. Rubin, CSc., Patofyziologicka laborator, prednosta MUDr. A.V. Gorkova, CSc., Vyzkumny ustav traumatologie a ortopedie, reditel doc. dr. J.N. Rodin, Saratov.

(SPINAL CORD INJURIES)
(RADIOIODINE ISOTOPES, DIAGNOSTIC)
(THYROID FUNCTION TESTS)
(ADRENAL CORTEX FUNCTION TESTS)
(PITUITARY GLAND)

BABICHENKO, Ye.I., kand. med. nauk; SHUL'DYAKOV, A.A., kand. med. nauk

Surgical tactics in fractures of the thoracic and lumbar regions of the spine with lesions of the spinal cord. Vop. neirokhir. 27 no.2:5-10 Mr-Apr '63. (MIRA 17:2)

1. Saratovskiy nauchno-issledovatel'skiy institut travmatologii i ortopedii (dir. - dotsent Ya.N. Rodin).

BABICHENKO, Ye.I., kand. med. nauk; ARANOVICH, V.L.

Treatment of decubitus ulcers in patients with spinal cord injury by free skin autotransplantation. Vop. neirokhir. 27 no.2:13-18 Mr-Apr '63. (MIRA 17:2)

1. Klinika neyrokhirurgii Saratovskogo nauchno-issledovatel'skogo instituta travmatologii i ortopedii (dir. - dotsent Ya.N. Rodin).

BABICHENKO, Ye.I., kand.med. nauk (Saratov)

Comparative evaluation of methods of withdrawal of urine
in patients with spinal cord injuries. Vop. neurokhir. 27
no.4:32-37 J1-Ag'63 (MIRA 17:2)

1. Klinika neyrokhirurgii nauchno-issledovatel'skogo instituta
travmatologii i ortopedii (dir. - dotsent Ya. N.Rodin).

SOV/179-59-1-35/36

AUTHOR: Babichev, A. I. (Moscow)

TITLE: Flow of Viscous Liquid Round a Vibrating Plate (Techeniya v vyazkoy zhidkosti okolo koleblyushchikhsya ploskostey)

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Mekhanika i mashinostroyeniye, 1959, Nr 1, pp 183-187 (USSR)

ABSTRACT: In Refs.1 and 2 the problem of motion is considered where a flat plate vibrates in the direction of its plane and at the same time is affected by an external pressure. In this case the general equation of velocity, Eq.(0.1), becomes Eq.(0.2) as an equation of motion in the liquid. The author enlarges the problem by considering a plate vibrating in 2 directions: one, as above, and second, perpendicular to the plane. The movement in a layer of liquid between two parallel planes (Fig.1) which are subjected to the pulsation defined by Eqs.(1.1) and (1.2), is considered. The equation of motion of the liquid at constant pressure is expressed by Eq.(1.3) from which v at any instant of time is found from Eq.(1.4). In order to find the solution of Eq.(1.3) the components of the velocity u are defined as Eq.(1.5) (u - mean value, u' - component of pulsation). Substituting Eqs.(1.4) and (1.5) into Eq.(1.3), the Eqs.(1.6) and (1.7) are obtained (T -

Card 1/6

SOV/179-59-1-35/36

Flow of Viscous Liquid Round a Vibrating Plate

time interval). The equation of component of pulsation u' , Eq.(1.8) is found from Eqs.(1.6) and (1.7). Thus instead of Eq.(1.3) the system of equations, Eq.(1.7) and (1.8) is derived. By integrating (1.7), the expression (1.9) is obtained which can also be written as Eq.(1.10) in order that friction $u'dU/dy$ can be equalised with the tension, $-\rho u'v'$. Excluding dU/dy from eqs.(1.8) and (1.9), the expression (1.11) is found. To find the solution of Eq.(1.11), the expression (1.12) should be considered where $a_1, b_1, a_2, b_2, \dots, a_n, b_n$, - unknown functions of y . Then, by multiplying Eq.(1.4) by Eq.(1.12) the expression (1.13) is found which becomes Eq.(1.14) when the mean time is taken. Substituting the Eqs. (1.12), (1.13), (1.14) into Eq.(1.11), the final solution, Eqs.(1.15), is derived which should be calculated for the limiting values given in Eqs.(1.16). The first approximation of the functions a_1 and b_1 is found when a_2 and b_2 in Eqs.(1.15) is taken as zero. Then, Eqs.(1.17) is obtained,

Card 2/6

SOV/179-59-1-35/36

Flow of Viscous Liquid Round a Vibrating Plate

from the first approximation of which Eq.(1.8) can be derived when $\partial(u'v' - \overline{u'v'})/\partial y$ equal to $v'(\partial U/\partial y)$ is disregarded. As an example the order of u' and v' can be taken as δ , then the order of $\overline{u'v'}$ will be δ^2 . The term $u(dU/dy)$, as it can be seen from Eq.(1.9), will be of the same order as $\overline{u'v'}$. If the layer is 1 cm thick and:

$$\nu = \frac{1}{100} \frac{\text{cm}^2}{\text{sec}}, \quad a \frac{dU}{dy} \sim 1000 \frac{1}{\text{sec}},$$

then δ^2 will be in the order of $10 \text{ cm}^2 \text{ sec}^{-2}$ and $\delta \sim 3 \text{ cm/sec}$. If the 2 terms of Eq.(1.6) are compared, i.e. the term $v'(dU/dy)$ which is of the order 3000 cm sec^{-2} and the term $\partial(u'v' - \overline{u'v'})/\partial y$ of the order 10 cm sec^{-2} , it is evident that the latter can be disregarded. Therefore, the first approximation of a_1 and b_1 can be considered as sufficient. When b_1 is excluded from Eq.(1.17), a differential equation of 4th order is obtained for a_1 (Eq.1.18) which

Card 3/6

SOV/179-59-1-35/36

Flow of Viscous Liquid Round a Vibrating Plate

can be solved if the denotation (1.19) is introduced. Then Eq.(1.20) is obtained for the conditions (1.21), i.e. for the sufficiently intensive vibration. The limiting conditions are defined as Eqs.(1.22) to (1.25). The solution will have the form given in Eqs.(1.26). Therefore, a_1 can be written as Eq.(1.27), where c_1 and c_2 are determined from Eq.(1.26). By substituting Eqs.(1.27) and (1.14) into Eq.(1.9), after integrating the equation of mean velocity, Eq.(1.28) is obtained, where c_5 is calculated from Eq.(1.29) and the velocity U at $y = \pm h$ is equal to 0. The maximum value of the mean velocity U at $y = 0$ is found from Eq.(1.30) (Fig.2). The solution of the problem can be considered when the thickness of the layer of liquid h exists above the horizontal plane ($y = 0$) which pulsates with a velocity $u = a_1 \cos \omega t$, $v = b_0 \cos \omega t$. If the function $u(y, t)$, similar to that of Eq.(1.5) is required, then the conditions (1.31) (for free surface) and (1.32) (bottom of the layer)

Card 4/6

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Flow of Viscous Liquid Round a Vibrating Plate

must be considered. The expressions (1.27) and (1.28) will give the solution as the first approximation. The curve $y = -h$ in this case will be equivalent to the bottom of the layer (Fig.3). The expressions (1.27) and (1.28) will take the form of Eqs.(1.33) and (1.34) when the solution is required in the form of the coordinates $(y = y_1 - h)$, where y_1 lies between 0 and $y_1 = h + (b_0/\omega)\sin \omega t$. In the case when the flow is generated by the vibration of the plate, it is assumed that the latter is placed below a layer of liquid (Fig.4). Then, when the formulae for plane vibration are expressed as Eq.(2.1), the motion of liquid will be described by Eq.(1.3) where $v = b_0 \cos \omega t$ and $y = y_1 + y_0(t)$ (Eq.(2.2)). The final equation of motion will be Eq.(2.3) with its solution expressed as Eq.(2.4). The expression (2.5) will be a solution of Eq.(2.1) when the limiting conditions (2.1) are satisfied. When analyzing the expression (2.5) it is seen that Eq.(2.6) defines a mean value of the velocity u during the period $2\pi/\omega$. Both equations, Eqs.(2.5) and (2.6), are true when y lies between $y = b_0/\omega$ and ∞ (Fig.

Card 5/6 5, where $Y = ky$). If $y = 0$, then Eq.(2.7) could be

SOV/179-59-1-35/36

Flow of Viscous Liquid Round a Vibrating Plate

derived which does not satisfy the condition under discussion because the mean velocity would be negative (Eq.2.8). Therefore, an additional equation of motion should be introduced in order that the mean velocity could be represented as shown in Fig.6, where $Y = ky$, $U' = (U - U(0))/\alpha$. Any additional tension in this case is counterbalanced by the viscosity which can be seen from the Eq.(2.11) which is derived from Eq.(2.9) (differentiated equation (2.6)) and Eq.(2.10) (mean value of the product uv). There are 6 figures and 3 Soviet references.

SUBMITTED: July 1, 1958.

Card 6/6

68.76

S/179/59/000/06/027/029
E191/E181

AUTHOR: Babichev, A.I. (Moscow)

TITLE: Choice of the Optimum Conditions in Porous Cooling

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Mekhanika i mashinostroyeniye, 1959, No 6, pp 147-149 (USSR)

ABSTRACT: The problem treated is that of finding a particular distribution of suction velocities along the profile which yields the minimum heat flow at a given flow of cooling gas. The equations are set up for a flat plate with a constant temperature to analyse the boundary layer assuming a Prandtl Number of unity. The problem is formulated as a variational problem to find the extremum of an integral, shown to be the variable factor in the expression for heat flow Eq (16), on condition that the volume flow remains constant. Applying the Euler equation which is a solution of this problem, equations are derived for the optimum velocity distribution. In a numerical example the velocity distribution is computed and plotted in terms of specially defined variables appearing in the analysis. A comparison shows the heat

Card
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E191/E191

Choice of the Optimum Conditions in Porous Cooling
flow under optimum conditions to be 60% of the heat
flow with uniform velocity.
There are 2 figures and 3 Soviet references.

ASSOCIATION: Institut mekhaniki AN SSSR
(Institute of Mechanics, Acad. Sci. USSR)

SUBMITTED: April 21, 1958

Card 2/2

BABICHEV, A.P.; D'YACHENKO, V.I.

Technological potentialities of vibratory tumbling. Stan i
instr. 36 no. 12:26-29 D '65 (MIRA 19:1)

S/120/60/000/01/002/051

AUTHORS: Babichev, A.P. and Fedorov, N.D. ^{E032/E314}

TITLE: "Subharmonic" Acceleration of Ions in a Cyclotron ¹⁹

PERIODICAL: Priory i tekhnika eksperimenta, 1960, Nr 1,
pp 16 - 19 (USSR)

ABSTRACT: It is well known that ions can be accelerated in a cyclotron if their Larmor frequency of revolution is close to the value given by:

$$\omega = \omega_0 / k \quad (1)$$

where ω_0 is the angular frequency of the accelerating voltage and k is an odd integer (Ref 1). Such ions will be accelerated when they pass through the slit between the dees after each k half-periods of the high-frequency voltage. If, for example, the cyclotron is designed to accelerate N^{+6} ($k = 1$) ions, then it

will also accelerate N^{+2} ions ($k = 3$). The present note is concerned with a brief discussion of the phase relationship in the central part of a cyclotron for

Card1/4 $k \neq 1$. The work was completed in 1955. Following



S/120/60/000/01/002/051

"Subharmonic" Acceleration of Ions in a Cyclotron ^{E032/E314}

Ref 3, it is easy to show that the equations of motion of ions in a cyclotron with a uniform high-frequency field $E = E_m \cos \omega_o t$ can be written down in the form given by Eq (2) where e , m are the charge and mass of a proton, Z , A and φ_o are the charge, mass number and the initial phase of the ion, and $\dot{x}_o$, $\dot{y}_o$ are the components of the initial velocity of the ion at $t = 0$ ($x = x_o$, $y = y_o$). It is assumed that the Y axis is directed down the slit between the dees while the electric-field vector lies along the negative X axis. Since only the harmonic terms depend on t , the trajectories of the ions are closed. Figure 1 shows the trajectories of ions with various initial phases for $k = 3$ and Figure 2 shows these trajectories for $k = 5$. In both cases $\dot{x}_o = \dot{y}_o = 0$. In practice, the accelerating field is not uniform and one must introduce the concept of the effective width of the accelerating slit 25.

Card2/4



S/120/60/000/01/002/051

E032/E314

"Subharmonic" Acceleration of Ions in a Cyclotron

If the ion leaves the electric field region its trajectory becomes an open curve. The change in the phase of the ions is then determined by the parameter δ/λ_k (Ref 2). The initial section of the trajectory of the ion can be determined from Figures 1 and 2. The time taken between the source and the point of exit from the effective slit can be determined from Figures 3 and 5. In the region where the electric field is absent, the ion describes a circle. The table on p 19 gives the values of the phase φ_1 for $k = 3$ and $k = 5$ after the first half-revolution of the ion when it intersects the mean line between the dees ($x = 0$). In this calculation it was assumed that $\omega_0 = 7 \times 10^7 \text{ sec}^{-1}$, $2b = 4$, $\delta/\lambda_3 = 1.65$, $\delta/\lambda_5 = 0.81$.

It may be concluded that for $k = 3$ and $k = 5$ there is a strong phase bunching of the ions (stronger than in the case $k = 1$). Apparently, this explains the appearance

Card3/4



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E032/E314

"Subharmonic" Acceleration of Ions in a Cyclotron

in the cyclotron designed to accelerate N^{+5} and N^{+6} ions of beams of N^{+1} and N^{+2} ions. The figure captions are as follows: Figure 1 - ionic trajectories for different values of φ_0 and $k = 3$; Figure 2 - ionic trajectories for different values of φ_0 and $k = 5$; Figure 3 - dependence of x/λ_1 for ions with different φ_0 on the angle ωt in the case $k = 1$; Figure 4 - dependence of x/λ_3 for ions with different φ_0 on the angle ωt in the case $k = 3$; Figure 5 - dependence of x/λ_5 for ions with different φ_0 on the angle ωt in the case $k = 5$. There are 5 figures, 1 table and 4 references, 3 of which are Soviet and 1 English

SUBMITTED: October 13, 1958
Card 4/4



26692
S/056/61/041/005/007/038
B109/B102

26.2331

AUTHORS: Babichev, A. P., Karchevskiy, A. I., Luromkin, Yu. A.,
Sokol'skiy, V. V.

TITLE: Formation of a current channel through a gas discharge in a
weak magnetic field

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 41,
no. 5(11), 1961, 1378 - 1381

TEXT: The configuration of a toroidal power discharge in a weak magnetic field experimentally studied under three conditions: (a) constant magnetic flux in the liner cross section, (b) constant, and (c) variable longitudinal field at the discharge periphery. The experimental data may be interpreted by a stationary forceless discharge model. Experimental setup: The liner had a diameter of 160 mm. In one series of experiments it was of aluminum which secures a constant magnetic flux in the liner cross section. In another, it was of steel, providing a constant magnetic field strength at the discharge periphery. The steel liner was placed in a coil which could generate a variable magnetic field in the plasma. Operating data: Current in the aluminum (steel) liner 50 ka (35 ka), voltage at the beginning of Card 1/4

26692

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B109/B102

Formation of a current channel ...

discharge 1.1 kv, length of the first half-wave 600 μ sec, magnetic field at the beginning of discharge up to 1000 oersteds, head of the hydrogen filling between 0.01 and 0.001 mm Hg, plasma conductivity at the axis $6 \cdot 10^{14}$ ($8 \cdot 10^{13}$) CGSE. The exact field distribution may be seen in Fig. 1. For a closer investigation of the discharge character, an alternating magnetic field with variable amplitude and phase was produced with fourfold discharge frequency by means of an auxiliary coil (cf. D. P. Ivanov, V. D. Kirillov, DAN SSSR, 133, 793, 1960). The measuring results are shown in Fig. 2. The field strength $H_z(0)$ at the liner axis and the longitudinal field $H_z(r_0)$ at the periphery underwent a cophasal variation until the moment t_1 . At this moment, the longitudinal and azimuthal components of the magnetic field at the edge of the liner had the same amount. Due to the poor conductivity of plasma, the diffusion time of the magnetic field was relatively short. The observed formation of a current channel which somehow resembles the pinch effect may therefore be described by a stationary forceless discharge model. This holds good for both a constant and a variable external magnetic field. The values calculated with the

Card 2/4

Formation of a current channel ...

26692

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B109/B102

aid of this model are shown in Fig. 1 as solid and in Fig. 2 as broke lines. Theory and experiments are in good agreement. I. K. Kikoin, B. S. Kadomtsev, and V. D. Shafranov are thanked for discussions. There are 2 figures and 7 references: 6 Soviet and 1 non-Soviet. The reference to the English-language publication reads as follows: D. J. Lees, M. G. Rushbridge. Conference Report, Uppsala, IV A, p. 955, 1959. 4

SUBMITTED: May 17, 1961

Fig. 1. Course of the longitudinal (H_z) and azimuthal (H_φ) components of the magnetic field strength. (a) thick-walled aluminum liner, (b) non-magnetic-steel liner. Solid curves - forceless discharge model, broken lines - paramagnetic model. Legend: (1) outer wall of the liner.

Fig. 2. Oscillograms of the discharge current J_z and of the longitudinal field $H_z(0)$ in the middle of the liner with a variable magnetic field (r_0 - liner radius) superimposed.

Card 3/4

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24.6730

S/089/62/013/002/001/011
B102/B104

AUTHORS: Babichev, A. P., Venikov, N. I., Knyazyatov, A. S.,
Meshcherov, R. A., Mironov, Ye. S., Nemenov, L. M.,
Fedorov, N. D., Kholmovskiy, Yu. A.

TITLE: Control of the magnetic field configuration in a cyclotron

PERIODICAL: Atomnaya energiya, v. 13, no. 2, 1962, 125-134

TEXT: Between 1956 and 1959, experiments were made with a model magnet of one-fifth the full size, made of Ст.-3 (St.-3) steel, in connection with the redesign of the 1.5-m cyclotron belonging to the Ordena Lenina Institut atomnoy energii im. I. V. Kurchatova AN SSSR (Lenin Order Institute of Atomic Energy imeni I. V. Kurchatov, AS USSR). The pole pieces were either cylindrical (370 mm diameter) or conical (300 mm diameter) and the magnet gap was 90 mm wide. The current in the windings could be kept constant to within $\pm 0.1\%$, and the field strengths were measured with an error of $\pm 0.03-0.1\%$. The following were investigated: (1) the optimum geometry of the magnet to ensure a field of constant configuration ($\Delta H/H_0(R)$ minimum when H_0 changes), the magnet having

Card 1/3

Control of the magnetic field ...

S/069/62/013/002/001/011
B102/B104

cylindrical poles and three pairs of caps 14.5 mm thick of different diameters. The best results were obtained using caps with a diameter smaller than that of the poles. Measurements were made not only for $\Delta H/H_0 = f(R)$ with and without shims, but also for $\Delta H/H_0 = f(r)$, where r

is the radius of curvature of the caps. The constancy of the field configuration can be improved by replacing the caps by internal shims. (2) Correction of the magnetic field by inserting circular coils in the magnet gap between the caps. Experiments were made with six such coils, of different diameters, mounted on a brass frame. Each winding consisted of five turns of a 4 by 0.5 mm copper tube enclosing a flow of water. The field created by the coils $H_w(R)$ with current (150 a) and without current was measured by a differential method and their effect on the field configuration was studied under various conditions. Shimming seems to be the most convenient way of correcting the field. (3) Sector-type windings. These were used for generating a first harmonic and also for regulating the field. In the case of magnets with dead turns, the field of the first harmonic was measured in dependence on the radius. (4) Correction of the field by annular windings in the shimming gap. These are less effective in the shimming gap than in the magnet gap. (5) Correction of the field

Card 2/3

Control of the magnetic field ...

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B102/B104

for azimuthal variation. For this purpose, only one turn (Cu tube 3 by 0.5 mm; maximum current strength 600 a), was used which had the same effect as in an axisymmetric field. There are 15 figures.

SUBMITTED: August 23, 1961

Card 3/3

BABICHEV, A.P.; KARCHEVSKIY, A.I.; MUROMKIN, Yu.A.

Helical instability of a toroidal discharge in a variable magnetic
field. Zhur. eksp. i teor. fiz. 43 no.3:881-885 '62. (MIRA 15:10)
(Electric discharges) (Magnetic fields)

BABICHEV, A.P.; KARCHEVSKIY, A.I.; MUROMKIN, Yu.A.

Some characteristics of a toroidal discharge. Zhur. tekhn. fiz.
33 no.11:1400-1403 N '63. (MIRA 16:12)

BABICHEV, A.P., kand. tekhn. nauk; KHODOSH, B.B., inzh.; D'YACHENKO, V.I.,
inzh.

Vibratory polishing of parts with rotating spindles. Vest. mashino-
str. 45 no. 12:48-49 D '65 (MIRA 19:1)

L 04431-67

ACC NR: AP6014222

SOURCE CODE: UR/0115/66/000/003/0005/0008

AUTHOR: Kalantayev, F. P.; Babichev, A. P.; Myasnikov, V. A.;
Sabinin, Yu. A.; Tarasenko, Ye. V.

44
B

ORG: none

TITLE: Using Hall generators in computing devices intended for automatic systems

SOURCE: Izmeritel'naya tekhnika, no. 3, 1966, 5-8

TOPIC TAGS: Hall generator, analog computer

ABSTRACT: The fundamental shortcomings of widely used sine-cosine rotary transformers are: slip rings and brushes, high cost, complexity, inapplicability of dc and rf. Hence, an idea is suggested which would involve two Hall generators placed at right angles to each other in a magnetic field produced by the poles of an

Card 1/2

UDC: 681.142.64

L 04431-67

ACC NR: AP6014222

(electro)magnet. Three Hall generators shifted in space by 120° might serve as a synchro. By using a movable permanent magnet, a windingless and contactless design would be possible. Theoretical considerations re such a design, including formulas, pole-piece shapes, and error evaluation are set forth. A device based on these theoretical considerations "is being created at the present time." Orig. art. has: 4 figures and 11 formulas.

SUB CODE: 09 / SUBM DATE: none / ORIG REF: 002 / OTH REF: 001

019112

Card 2/2

ACC NR: AP6026441

(A)

SOURCE CODE: UR/0122/66/000/005/0064/0065

AUTHOR: Babichev, A. P. (Candidate of technical sciences); Khodosh, B. B. (Engineer);
Fishteyn, B. M. (Engineer)

ORG: None

TITLE: Stressed state of the surface layer of components treated by vibrorumbling

SOURCE: Vestnik mashinostroyeniya, no. 5, 1966, 64-65

TOPIC TAGS: metal polishing, abrasive, metal stress, surface phenomenon

ABSTRACT: The authors study the effect which vibrorumbling in a medium of grit and chilled steel balls has on second order residual stresses in the surface layer of steel specimens. X-ray diffraction analysis was used for determining residual stresses. Preliminary studies on 45 steel showed a reduction in microdeformations by a factor of 2-2.5. Welded specimens of St. 2 steel were subjected to vibrorumbling for 90 minutes at 2000 vibrations per minute with an amplitude of 1.25 mm in a medium of KCh 6-8 VTK abrasive grit (grain size 5-16 mm) and chilled steel balls 4-6 mm in diameter. The results show a reduction in second order stresses in the weld zone. The lower level of microdeformations in the heat-affected zone in comparison with the base metal is due to recrystallization processes in the unannealed base metal. Experiments conducted to determine the effect of initial stress level showed that the

Card 1/2

UDC: 621.923.9

ACC NR: AP6026441

nature of the variation in residual second order stresses due to vibrorumbling depends on the initial stress level: treatment of specimens with high initial stresses results in a reduction in the level of microdeformations while treatment of annealed specimens may increase the level of microdeformations in the surface layer. It is possible that vibrorumbling may be used to change the stressed state of the surface layer of components to increase their durability. Orig. art. has: 1 figure, 2 tables.

SUB CODE: 13/ SUBM DATE: None/ ORIG REF: 002
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Card 2/2

ACC NR: AP6033411

SOURCE CODE: UR/0057/66/036/010/1775/1778

AUTHOR: Babichev, A.P.; Karchevskiy, A.I.; Muromkin, Yu.A.; Isakov, I.M.

ORG: none

TITLE: Characteristics of a toroidal discharge at low plasma density

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no.10, 1966, 1775-1778

TOPIC TAGS: hydrogen plasma, plasma stability, plasma density, x-ray emission, weak magnetic field

ABSTRACT: The authors have investigated hydrogen plasmas in the aluminum toroidal chamber of the "Beta" installation. The plasmas were excited in hydrogen at from 0.001 to 0.01 mm Hg by discharge through a pulse transformer of a 0.007 F capacitor bank charged to up to 2 kV and were stabilized with a 0.1 to 1.0 kOe longitudinal magnetic field. The plasma density was measured with a double electric probe and a 2 mm wavelength microwave interferometer. When the chamber was well outgassed before the discharge, the plasma density was high (up to $5 \times 10^{13} \text{ cm}^{-3}$) only during the early stage of the discharge and decreased by a factor of from 5 to 20 after 200 or 300 microsec. During the decrease of the plasma density the discharge current decreased in a stepwise manner, and the current breaks were accompanied by simultaneous emission of hard (about 50 keV) x-rays from all parts of the chamber. The electric field in the plasma at this stage was approximately equal to the critical value for

Card 1/2

UDC: 533.9